2/6/84 U2160-1 A

The Indiana University School of Business Division of Research

Indiana Business Review

Volume 58 September-October 1983

Joel C. Webster — **Indiana Profile: Where the State Stands**

Patrick Klingaman — **Standard Time Zones: A Quiet Celebration of 100 Years**

Morton J. Marcus — **Shifts in Personal Income**

Brian Burden — **Recovery in 1983**

Indiana Profile: Where the State Stands

In this issue

Averages are amusing and ranks can be rollicking. Joel Webster offers a summary of Indiana's relative position in numerous categories, thanks to a compilation of the Census Bureau. These data are to be read with caution and used with care in drawing conclusions.

If time is money, then standard time is as important as a common national currency. Pat Klingaman reminds us of a national event which most will let slide when it occurs on November 18.

Two articles put the economic recovery into perspective. First, changes in personal income for Indiana and its neighbors are discussed. Then Brian Burden examines some aspects of the recovery to date.

Morton J. Marcus
Editor

Indiana Business Review

Published eleven times yearly (January and February issues are combined) by the Division of Research, Graduate School of Business, Indiana University.

John D. Long, Acting Dean
H.D. David, Administrative Director
Morton J. Marcus, Editor

Lowell McCoskey, Systems and Programming Manager; Jeanne Jones, Production; Vicki Blackwell, Composition; Jeanne Butler, Circulation; Nikki Livingston, Secretary.

Unless otherwise noted, information appearing in the *Indiana Business Review* is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division. Subscriptions to the *Indiana Business Review* are available to Indiana residents without charge.

Joel C. Webster

Research Associate, Division of Research, Indiana University Graduate School of Business

The Bureau of the Census has assembled a table of information (accompanying this article) which includes Indiana's rank among the fifty states on a number of measures. Although not all indices refer to the same date, the whole provides a profile of Indiana's position in the recent past.

Population

Indiana ranks twelfth among the fifty states in population. As it ranks only thirty-eighth in size (with 35,932 square miles), its population density of 152.8 individuals per square mile is 238% of the national average. Despite this density, it has a lower percentage of metropolitan residents than the nation as a whole. This population is slightly younger than the national average, with a lower percentage of nonwhites (8.9% versus 16.9% for the nation). Relatively few individuals moved into the state from elsewhere during the 1975-1980 period. In fact, this inmigration rate ranked forty-second among the fifty states.

Indiana has an average death rate, but the birth rate is slightly above the national average (though still only twenty-eighth in the nation). It also has an average marriage rate, but a divorce rate much higher than the national average, ranking ninth among the fifty states. Its legal abortion rate is substantially below the national average, only 227 per 1,000 live births compared to the national rate of 428 per 1,000 live births.

Lifestyle

Hoosiers are more likely than average to own their own homes. Only four states have a higher home ownership rate than Indiana. They are correspondingly less likely to reside in multi-unit structures. Only 10.8% of the total housing units are in structures containing five or more of those units, compared to 17.5% in the

Significant Rankings

Item	*Rank*
Total population, 1980	12
Land area, square miles, 1980	38
Population per square mile, 1980	13
Percent change in population, 1970-1980	35
Median age, in years, 1980	30
Population 65 years old and over, 1980	30
Non-White population, 1980	30
Black population, 1980	22
Asian and Pacific Islander, 1980	30
American Indian, Eskimo, and Aleut, 1980	39
Spanish population, 1980	26
Metropolitan population, 1980	20
Persons living in different state in 1975 (5 years old and over), 1980	42
Birth rate[1], 1979	28
Death rate[1], 1979	22
Marriage rate[1], 1980	25
Divorce rate[1], 1979	9
Legal abortions per 1,000 live births, 1980	37
Physicians per 100,000 population, 1980	42
Hospital beds per 100,000 population, 1980	26
Personal health care expenditures per capita, 1978	30
Total housing units, 1980	12
Year-round housing units, 1980, percent–	
Built between 1970 and 1980	41
Prior to 1940	19
With 5 or more units in structure	35
With air conditioning	25
Homeownership rate, 1980	5
Median value of specified owner-occupied housing units, 1980	39
Median gross rent of specified renter-occupied housing units, 1980	30
Crime rate[2], 1981	37
Federal and state prisoners per 100,000 population, 1981	21
Public elementary and secondary schools, 1981–	
Expenditures per capita	43
Current expenditures per pupil	41
Public school teachers' salaries, 1982	19
Percent high school graduates (persons 25 years old and over), 1980	32
Undergraduate enrollment in institutions of higher education, 1979	13
Civilian labor force, 1981	12
Unemployment rate, 1981	4
Manufacturing employment, 1979	
Number	10
Percent of employed	6
Average weekly earnings of production workers in manufacturing, 1981	6

Among the Fifty States

Indiana	*United States*
5,490,224	226,545,805
35,932	3,539,295
152.8	64.0
5.7%	11.4%
29.2	30.0
10.7% of population	11.3% of population
8.9% of population	16.9% of population
7.6% of population	11.7% of population
.4% of population	1.5% of population
.1% of population	.6% of population
1.6% of population	6.4% of population
69.8% of population	74.7% of population
7.6% of population	9.7% of population
16.2	15.9
8.5	8.5
10.7	10.9
7.7	5.4
227	428
128	185
585	602
$671	$745
2,091,795	88,411,263
22.0%	26.2%
32.1%	25.8%
10.8%	17.5%
58.6%	55.0%
71.7%	64.4%
$37,200	$47,200
$219	$243
4,540	5,800
138	153
$354	$434
$1,793	$2,350
$19,000	$19,000
66.4%	66.5%
180,170	8,820,657
2,617,000	108,670,000
10.1%	7.6%
731,800	21,914,754
30.9%	22.4%
$376	$318

Significant Rankings Among the Fifty States, continued

Item	*Rank*	*Indiana*	*United States*
Median household money income, 1979	18	$17,582	$16,841
Per capita money income, 1979	24	$7,142	$7,298
Percent below poverty level, 1979			
Persons	42	9.7%	12.4%
Children under 18 years	39	11.9%	16.0%
State and local governments, 1981–			
Expenditures, total	19	$8.9 billion	$487.0 billion
Expenditures per capita	49	$1,628	$2,150
Tax revenues per capita	40	$827	$1,079
Debt per capita	50	$798	$1,606
Federal Government expenditures per capita, 1981	49	$1,791	$2,414
Percent of voting-age population casting votes for President 1980	20	57.9%	53.2%
Motor vehicles per 1,000 population, 1980	25	730	713
Means of transportation to work, 1980			
Percent of workers commuting in carpools	29	20.0%	19.7%
Percent using car, truck, or van	10	89.9%	84.1%
Motor vehicle traffic fatalities per 100,000 licensed drivers, 1980	36	32	35
Energy consumption per capita, 1980	6	445 million BTU	334 million BTU
Temperature, average annual	24	52.5° F.	53.2° F.
Precipitation, average annual	23	39.5 inches	28.8 inches
Farms, 1978			
Number	11	88,427	2,478,642
Land in farms	19	17.0 million acres	1,029.7 million acres
Acreage per farm, 1982	35	191 acres	433 acres
Average value of farm land and buildings per acre, 1982	8	$1,715	$788
Gross farm income, 1981	9	$5.3 billion	$161.2 billion
Mineral production, value, 1980	25	$1.1 billion	$143.9 billion
Construction contracts, value, 1981	24	$2.4 billion	$150.2 billion
Manufacturing shipments, value, 1980	9	$63.4 billion	$1,850.9 billion
Manufacturing employment 1980, percent–			
Export related[3]	7	4.7%	3.6%
Defense related[4]	23	2.1%	3.6%
Retail sales per capita, 1977	21	$3,379	$3,291

[1] Per 1,000 resident population.
[2] Per 100,000 resident population.
[3] Percent of total private sector employment.
[4] Percent of all manufacturing employment.

Source: U.S. Bureau of the Census.

nation. Indiana residents are also more likely to travel to work in a car, truck, or van than residents in other states, though they are average in terms of the percentage of individuals commuting in carpools. Hoosiers consume nearly one-third more energy per person than does the average American. Indiana residents are more likely to vote for president than are citizens in the nation as a whole.

Health, Education and Government

Indiana has a shortage of physicians, ranking forty-third in the nation in this cate-

gory. If Indiana were at the national average in this category, it would have ten physicians per 100,000 residents, whereas it currently has only seven. It is average in terms of available hospital beds, but spends less on health care per capita than the nation.

In educational expenditures per pupil, Indiana spends $1,793 per year compared to the national average of $2,350. That is, the nation as a whole spends nearly $4 for every $3 spent in Indiana. Salaries of public school teachers, however, are precisely equal to the national average of $19,000.

State and local government expenditures per Hoosier rank forty-ninth of the fifty states, more than 24% below the national average. Federal government expenditures per capita within this state also rank forty-ninth in the nation, with the federal government spending $623 less per year on each Hoosier than it does for the average American.

Economy

Indiana ranks ninth among the fifty states in gross farm income (5.3 billion dollars). This occurs despite the small average size of Indiana farms (191 acres versus the U.S. average of 433 acres).

It also ranks ninth in the value of its manufacturing shipments (63.4 billion dollars). Only five states have a higher percentage of their workers employed in the manufacturing sector and Hoosier workers earn more per week than manufacturing workers in all but five states. However, the 1981 unemployment rate in Indiana was fourth in the nation at 10.1%. Only 2.1% of manufacturing employment in Indiana is defense-related, compared to the national average of 3.6%.

See the Table for additional comparisons. □

Standard Time Zones: A Quiet Celebration of 100 Years

by Patrick Klingaman

Research Assistant, Division of Research, School of Business, Indiana University

A busy modern business executive hopping on a train or plane in Washington, D.C. to make a last-minute appointment in New York need only glance at a wristwatch to see if he or she has arrived in time. Intercity travelers relying on their watches prior to 1883 would likely have missed a lot of appointments.

Before November 18, 1883, each of the larger cities in the United States had its own "solar" time (based on when the sun was directly overhead), which was used by many of the surrounding smaller towns and most railroad routes originating in that city. Instead of the four time zones present for the past 100 years, railroad schedulers had only managed to reduce the hundreds of local times (Indiana alone had 23) to a patchwork of 53 "standard" times. Even our Washington to New York traveler would have had to reset his watch at least three times along the way to coincide with the times at the various city train stations.

The menagerie of time standards, combined with faster trains running on tight schedules, created confusion and bewilderment among passengers, commercial shippers, and even railroad employees. Stations in major cities displayed up to six clocks for passengers—each reading a different time and corresponding to a separate railroad line—so it was more often a matter of luck than skill that a passenger switching trains ever arrived in time to make proper connections. Time problems, together with lack of uniformity in train cars, rails, and signaling practices, made commercial and passenger rail operations slow, inefficient, and sometimes dangerous.

For a nation in the midst of a transition from an agrarian base to a major industrial power, such a transportation nightmare was simply not tolerable. England had pioneered the single standard time concept as far back as 1848, but U.S. railroad officials realized that applying one time to a vast, sprawling nation would be very impractical and would "disrupt local customs." The idea of dividing the country into four time belts or zones was first credited to Professor C.F. Dowd, principal of the Temple Grove Seminary for Young Ladies in New York, who offered his interesting but sketchy proposal as early as 1872. That same year, a large group of railroad leaders gathered in St. Louis and formed an organization called the Time-Table Convention, later known as the General Time Convention.

With a strong organization in place, and deluged with wide-ranging ideas, all the railroads needed was a leader to make sense of it all. William F. Allen, a former railroad engineer and then editor of the *Official Guide of the Railways*, was elected secretary of the first General Time Convention in 1876. He immediately started searching for a way to fuse and mold many heavily theoretical proposals into a practical plan.

Allen emerged in 1883 with a plan calling for the four time zones we have today: Eastern, Central, Mountain, and Pacific. Instead of dividing the zones precisely along the 75, 90, 105, and 120 meridians, as many scientists had proposed, Allen proposed to alter the boundaries substantially to coincide with major railroad switching points. He also proposed that the railroad time zones apply to the rest of the nation as well and included an appeal to cities to abandon their local time standards—a pretty bold move considering his organization had no authority to implement such a policy.

The General Time Convention adopted Allen's plan on October 11, 1883, and selected noon on Sunday, November 18 to change the clocks. Now came the task of convincing the rest of the country to go along with it. With some exceptions, people generally understood the convenience of uniform time and welcomed the change. The *New York Times* strongly endorsed the plan, saying, " . . . its convenience and simplicity will be so generally recognized that the people will wonder why the change was delayed so long." A *Chicago Tribune* editorial stated, "Seldom has a revolution so radical been effected with such an absence of opposition and friction."

Although those opposing standard time were definitely in the minority, they were

a very loud and emotional minority. Most city councils quickly voted to adopt standard time, but cities such as Fort Wayne, Indianapolis, and Chicago still hadn't gone along with the change by November 18. Mayor Dogberry of Bangor, Maine, vetoed a time-change ordinance passed by the city council, shouting, "It is unconstitutional, being an attempt to change the immutable laws of God Almighty and hard on the workingman by changing night into day." The mayor vowed to keep the church bells from ringing on the new time—by force if necessary.

Many of those opposed to standard times were not so much against the standards themselves but were angered by the fact it was the railroad's time. Some expressed the desire to live on "God's time—not Vanderbilt's." An editorial in the *Indianapolis Sentinel* best summed up the anti-railroad attitude.

"The sun is no longer boss of the job. People—55,000,000 of them—must eat, sleep and work as well as travel by railroad time. It is a revolt, a rebellion . . . People will have to marry by railroad time, and die by railroad time. Ministers will be required to preach by railroad time—in fact, the Railroad Convention has taken charge of the time business and the people may as well set about adjusting their affairs in accordance with its decree."

The *New York Times* also attacked the time plan, if only in jest, by noting the most serious flaw of the plan is that it went into effect on Sunday, when, in some areas, "people will go to church by the old time and come out of it by the new," thus lengthening the amount of time a clergyman could "inflict" his sermon upon his "helpless flock."

Some clergymen were not amused, however. In Tennessee, for example, the Reverend Mr. Watson emphasized his disgust at the Louisville & Nashville Railroad's abandonment of sun time by smashing his watch with a hammer on the pulpit in front of the entire congregation.

Despite the opposition, the transition to standard time on November 18 went about very smoothly. Telegraph signals guided the many train stations and jewelry shops in setting their clocks to the new time. The event attracted quite a crowd, according to the *New York Times*, since many people couldn't understand how such a great transformation could occur without some serious consequences. "There was a universal expression of disgust when it was discovered that all that was necessary to effect the change was to stop the clock for four minutes and then start it again."

Resetting the clocks might have only taken a few minutes, but it took much longer for the entire nation to switch over to standard time. By the middle of 1884, 22 of the 100 largest U.S. cities still refused to part with their local standards—it took Cincinnati seven years to come around. Louisville even switched back to

local time for a short period. It took the federal government 35 years to act on the issue, passing the Standard Time Act in 1918. The government has, over the years, made a few changes in Mr. Allen's original plan, but the substance of the railroad plan remains.

A Sample of Local Time

City	*1883*	*1983*
Washington, D.C.	12:50 p.m.	1:00 p.m.
Pittsburgh	12:31 p.m.	1:00 p.m.
Cleveland	12:24 p.m.	1:00 p.m.
Cincinnati	12:13 p.m.	1:00 p.m.
Louisville	12:09 p.m.	1:00 p.m.
Indianapolis	12:07 p.m.	1:00 p.m. (winter) Noon (summer)
Chicago	Noon	Noon
St. Louis	11:50 a.m.	Noon
Dubuque	11:48 a.m.	Noon
St. Paul	11:41 a.m.	Noon
Omaha	11:27 a.m.	Noon

Source: *The Day of Two Noons* by Carlton J. Corliss, Chicago, 1941.

What was the impact of standard time? Considering that the bulk of the intercity freight and passenger traffic of the period depended upon the railroads, the benefits associated with the resulting increase in rail efficiency and safety are incalculable. The simple need to make the trains run on time made it all possible. Beyond that, a common standard of time helped complete the unification of the country. The Civil War, the railroads, the telegraph, and a common currency were now joined by a common time standard, which helped mold a nation and set the basis for the emergence of a world power. □

Shifts in Personal Income

Morton J. Marcus

Research Economist, Division of Research, Indiana University Graduate School of Business

Indiana's personal income grew in the second quarter of 1983 by $1.1 billion, or 1.96%. (Data are nominal values seasonally adjusted at annual rates.) These recently released results from the Bureau of Economic Analysis in the U.S. Department of Commerce indicate that the economic expansion of the second quarter was more rapid than that of the first quarter, when Indiana's personal income advanced at a 1.40% rate. Since the low of the recent recession in the last quarter of 1982, Indiana's personal income has advanced by 3.38% compared with a national growth rate of 3.19%. (See Table 1.)

Michigan's advance of 4.39% in personal income in the past half year has been the strongest of the four states bordering on Indiana. Illinois has also outpaced the nation, but Ohio and Kentucky have grown more slowly than the country as a whole. Nationally, the rate of growth in personal income accelerated sharply in the second quarter, leaving all five states growing at rates behind the U.S. pace. Growth in Kentucky and Michigan ran counter to the national pattern by slowing in the second quarter. Ohio has trailed the national growth rate in both quarters of this year.

Differential rates of growth can be expected as the recovery surges through the economy. Persistent attention to quarterly patterns tends to obscure the longer term patterns as reported in Table 2. In the second quarter of 1983, Indiana's share of the nation's personal income stood at 2.1198%, down from 2.4179% in the second quarter of 1977. Less than one-

Table 1

Percent Change in Personal Income

	1982:4-1983:1	*1983:1-1983:2*	*1982:4-1983:2*
Indiana	**1.40**	**1.96**	**3.38**
Illinois	1.19	2.16	3.37
Kentucky	1.34	1.02	2.38
Michigan	2.56	1.79	4.39
Ohio	0.80	2.14	2.96
United States	**0.96**	**2.21**	**3.19**

Table 2

Percent Share of U.S. Personal Income (second quarter of year shown)

	1977	*1979*	*1981*	*1983*
Indiana	**2.4179**	**2.3920**	**2.2160**	**2.1198**
Illinois	5.9617	5.7695	5.4800	5.3589
Kentucky	1.3585	1.3354	1.2794	1.2626
Michigan	4.5175	4.4625	4.0905	3.8905
Ohio	4.9887	4.8623	4.5874	4.4416
Five-state total	**19.2443**	**18.8217**	**17.6533**	**17.0734**

Table 3

1983:2 Total Personal Income (in billions of dollars, SAAR)*

	As realized	*1977:2 share*	*Difference*	*Realized as a percent of 1977:2 share*
Indiana	**$57.4**	**$65.5**	**$8.1**	**87.7**
Illinois	145.2	161.5	16.3	89.9
Kentucky	34.2	36.8	2.6	92.9
Michigan	105.4	122.4	17.0	86.1
Ohio	120.3	135.2	14.8	89.0

*SAAR = Seasonally adjusted at annual rates

Indiana's Business

Recovery in 1983

third of that decline was experienced in the past two years; nearly 60% of the loss took place between 1979 and 1981. Hence, it would be erroneous to assume that the recent recession (July 1981 to November 1982) was chiefly responsible for Indiana's declining share of national personal income.

For all five states the pattern is similar: more than half of the lost share during the past six years for Indiana and its neighbors occurred between the second quarter of 1979 and the same quarter of 1981. The region, if these five states may be so considered, declined from 19.2% of the nation's personal income to 17.1%, a loss of 2.2% (numbers may not add because of rounding). This lost share was equal to $58.8 billion in the second quarter of 1983. Alternatively stated, if the five states together had the same share of the nation's personal income this spring that they enjoyed in the spring of 1977, their total income would have been nearly $60 billion more than actually reported by the Bureau of Economic Analysis. (See Table 3.)

Indiana's share of this $58.8 billion was $8.1 billion, or 13.7%. These sums represent the lost opportunities of the citizens in this state and its neighboring states—lost opportunities for salaries and wages and other forms of personal income which translate into retail dollars and tax revenues. In the Hoosier state, our reduced share of the national total left personal income 12.3% below its equivalent 1977 level. Only Michigan, of the five states, had a poorer record.

If the national expansion now in progress results in this state advancing faster than the nation, as has often happened during past recoveries, then some of that lost share can be regained. But no recovery of the lost income is possible. Those opportunities are gone and attention must be focused on such opportunities as may lie ahead. □

Brian Burden

Research Assistant, Division of Research, Indiana University Graduate School of Business

The general consensus among national economists was that the U.S. economy began its current recovery late last fall. The U.S. index of leading economic indicators posted successive monthly gains starting in October 1982 and the national unemployment rate started declining from its November high of 10.8%. But how has Indiana's economy done in comparison?

Construction Activity

The construction industry is usually one of the leading sectors in an economic recovery. As interest rates ease and credit loosens, construction activity responds positively. Increased construction activity creates ripple effects that spill into complementary industries like glass, lumber, steel, and electrical supplies.

Total construction activity is up 12.6% from a year earlier in the first eight months of 1983. The total construction activity index reached a high of 507.8 in February of 1979, but slid to a low of 164.5 in February of 1982 before rising again to its August 1983 level of 238.2.

Housing Starts

Housing starts reached an historic high of 48,902 units in 1973. (We began keeping records in 1953.) The next best year was in 1978 when 42,530 units were started. Although seasonally adjusted housing starts are up by 48.4% in the first eight months of 1983, the total number of housing starts projected for 1983 will be 19,400 units, quite a bit below the peak years in the early 1970s.

Unemployment Rate

The seasonally-adjusted unemployment rate in Indiana reached a high of 14.0% in November 1982. After declining to 8.8% in July, the unemployment rate edged up slightly to 9.3% in August, very near the national average.

As recently as May 1979, the unemployment rate was as low as 5.4%. Only during the 1974-75 recession did Indiana's unemployment exceed 8% and then only from January to October of 1975. By contrast, the Indiana unemployment rate has not been below 8% since December of 1979.

Manufacturing Employment

Manufacturing employment also tends to vary directly with the economy. Typically an economic slowdown will hit the durable goods manufacturers harder and longer because consumers postpone purchases of big-ticket items in the face of uncertain employment conditions. Indiana has a large manufacturing sector and manufacturing employment has fluctuated widely.

Seasonally-adjusted manufacturing employment rose to 767,590 in December of 1973, and fell after the oil embargo and subsequent recession until July 1975. Manufacturing employment reached 753,280 in December 1978, but then decreased dramatically during the last recession.

Although the manufacturing employment index rose 0.4% in the first eight months of 1983, manufacturing employment stood at only 570,800 in August, down 192,480 or 24% from December 1978.

Non-manufacturing Employment

Non-manufacturing employment would include the areas of banking and financial services, agriculture, wholesale, retail, and food services. The seasonally-adjusted non-manufacturing employment index declined 0.1% in the first 8 months of 1983.

Growth in the non-manufacturing sector has been significant in the past 15 years. Seasonally adjusted non-manufacturing employment averaged 1,094,470 during 1968 while it averaged 1,427,160 in 1982. Non-manufacturing employment peaked at 1,513,150 in August 1979 and

then declined to 1,417,310 by August 1982. Non-manufacturing employment rose from August 1982 to January 1983, but then began declining through June 1983. The number of people employed in the non-manufacturing sector was 1,419,000 as of August and at the current rate of recovery, an average of 1,416,530 persons will be employed in this sector in 1983.

Raw Steel Production

Indiana is the largest raw steel producing state in the nation. Raw steel production reached a high of 2.33 million tons in July 1979, with a high monthly average of 2.04 million tons. The monthly average dropped in each successive year to 1.37 million tons in 1983. Raw steel production reached a low of 1.10 million tons in December 1982, but has increased dramatically to 1.82 million tons in August 1983. With the current pace of the recovery, raw steel production is projected to average 1.63 million tons a month during 1983.

Clearly, the economic recovery is underway in Indiana. The economic recovery will continue to be slower in some sectors than in others. Most of the sectors mentioned in this article are experiencing the recovery, yet none of the sectors has reached its pre-recession levels. Although we have come some distance, there is a long way to go. □

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

City	*August 1983*	*July 1983*	*August 1982*	*Percent Change From: Last Month*	*One Year Ago*
Anderson	19.9	22.0	22.2	−9.54	−10.35
Bedford	12.9	13.5	11.7	−4.43	10.26
Bloomington	4.6	4.3	4.4	6.98	4.55
Columbus	18.3	17.8	16.8	2.81	8.93
Connersville	10.1	10.1	8.8	.00	14.77
Crawfordsville	12.9	13.1	10.9	−1.52	18.35
East Chicago	20.9	19.8	20.1	5.56	3.98
Elkhart	24.6	23.8	21.2	3.36	16.04
Evansville	49.3	48.9	45.5	.82	8.35
Fort Wayne	46.8	49.6	42.1	−5.64	11.16
Frankfort	9.5	9.4	9.1	1.06	4.40
Gary	191.2	191.7	137.3	−.25	39.26
Goshen	10.9	11.0	9.3	−.90	17.20
Hammond	59.5	63.9	60.3	−6.88	−1.32
Huntington	4.8	5.2	4.7	−7.68	2.13
Indianapolis	377.7	345.3	334.8	9.38	12.81
Jeffersonville	4.9	5.6	4.8	−12.49	2.08
Kokomo	76.3	71.6	68.1	6.56	12.04
Lafayette	38.5	46.3	35.6	−16.84	8.15
LaPorte	13.6	13.8	13.3	−1.44	2.26
Logansport	10.2	7.9	8.1	29.11	25.93
Madison	2.8	3.6	2.4	−22.21	16.67
Marion	35.0	31.5	31.0	11.11	12.90
Michigan City	21.8	17.9	51.2	21.79	−57.41
Muncie	15.8	14.5	13.9	8.97	13.67
New Albany	4.7	5.3	4.8	−11.31	−2.07
New Castle	7.4	8.6	8.2	−13.94	−9.75
Peru	5.4	5.6	5.4	−3.56	.00
Richmond	30.2	23.9	26.0	26.36	16.15
Seymour	2.6	2.7	2.1	−3.69	23.81
South Bend	26.0	26.8	26.4	−2.98	−1.51
Terre Haute	24.4	23.9	25.8	2.09	−5.42
Valparaiso	8.6	7.7	8.9	11.69	−3.36
Vincennes	3.3	4.0	2.5	−17.49	32.00
Wabash	6.1	8.0	6.1	−23.74	.00
Indiana	**1940.9**	**1923.2**	**1767.4**	**.92**	**9.82**

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

City	*September 1983*	*August 1983*	*September 1982*	*Percent Change From: Last Month*	*One Year Ago*
Anderson	21.4	19.9	21.1	7.54	1.42
Bedford	15.2	12.9	12.8	17.83	18.75
Bloomington	5.0	4.6	4.5	8.70	11.11
Columbus	17.6	18.3	15.8	−3.82	11.39
Connersville	10.5	10.1	8.3	3.96	26.51
Crawfordsville	12.9	12.9	10.6	.00	21.70
East Chicago	21.0	20.9	19.1	.48	9.95
Elkhart	24.5	24.6	19.4	−.40	26.29
Evansville	51.0	49.3	45.2	3.45	12.83
Fort Wayne	46.3	46.8	36.6	−1.06	26.50
Frankfort	8.7	9.5	7.5	−8.41	16.00
Gary	187.6	191.2	137.7	−1.87	36.24
Goshen	10.6	10.9	8.5	−2.74	24.71
Hammond	61.8	59.5	58.2	3.87	6.19
Huntington	5.9	4.8	4.8	22.92	22.92
Indianapolis	368.4	377.7	332.5	−2.45	10.80
Jeffersonville	6.2	4.9	5.4	26.53	14.81
Kokomo	80.4	76.3	67.8	5.37	18.58
Lafayette	47.6	38.5	39.1	23.64	21.74
LaPorte	13.1	13.6	13.0	−3.67	.77
Logansport	10.0	10.2	9.0	−1.95	11.11
Madison	3.6	2.8	2.5	28.57	44.00
Marion	31.7	35.0	29.0	−9.42	9.31
Michigan City	21.9	21.8	19.9	.46	10.05
Muncie	22.4	15.8	13.1	41.77	70.99
New Albany	5.4	4.7	4.8	14.89	12.50
New Castle	10.0	7.4	7.0	35.14	42.86
Peru	5.7	5.4	5.0	5.56	14.00
Richmond	26.4	30.2	24.0	−12.57	10.00
Seymour	2.9	2.6	2.5	11.54	16.00
South Bend	29.4	26.0	25.3	13.08	16.21
Terre Haute	30.5	24.4	27.8	25.00	9.71
Valparaiso	9.9	8.6	8.3	15.12	19.28
Vincennes	4.3	3.3	2.7	30.30	59.26
Wabash	5.0	6.1	6.2	−18.02	−19.34
Indiana	**1991.5**	**1940.9**	**1713.2**	**2.61**	**16.24**

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

	United States				Indiana			
Employment	*Latest Month*		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	September	137.5	136.4	135.6	September	112.1	112.0	112.8
Manufacturing Employment	September	96.9	96.6	95.4	September	79.6	79.7	81.0
Average Weekly Hours (No.)[2]	September	40.7	40.2	38.9	September	41.7	41.0	39.2
Average Weekly Earnings ($)[2]	September	362.64	353.36	334.15	September	423.26	412.05	384.16
Nonmanufacturing Employment	September	154.5	153.3	152.6	September	134.1	133.8	134.3
Unemployment Rate (%)	September	9.1	9.4	10.1	September	9.4	9.3	12.2
Unemployment–Married Males (%)	September	6.1	6.3	7.2	–	–	–	–
Continued Unemployment Claims	–	–	–	–	–	–	–	–
Production								
Bituminous Coal Production	August	153.1	147.3	143.2	–	–	–	–
Industrial Electricity Production	June	141.8	139.0	131.0	–	–	–	–
Industrial Electricity Sales	–	–	–	–	September	171.8	167.4	147.4
Manufacturing Production	September	155.0	152.3	137.1	September	144.2	144.2	133.4
Raw Steel Production	August	69.3	68.5	54.8	September	127.4	123.7	97.4
Construction								
Construction Activity–Total	August	352.2	343.8	295.4	September	223.7	238.2	201.3
Residential Housing Starts	September	128.6	148.6	88.3	September	73.6	95.3	71.1
Residential Expenditures	August	473.5	465.2	286.2	September	289.5	307.5	193.5
Nonresidential Expenditures	August	299.3	290.7	305.2	September	175.4	182.3	181.8
Public Expenditures	August	205.0	199.2	203.3	–	–	–	–
Public Works and Utilities	–	–	–	–	September	214.7	233.0	242.6
Other Indicators								
Personal Income Per Capita ($)	July	11718.1	11665.4	11152.5	1983:2	10,500	10,359	9,889
Passenger Car Sales (Thousands)[2]	September	704.0	741.0	671.0	–	–	–	–
Year to Date (Thousands)	September	6783.0	6079.0	5948.0	–	–	–	–
Passenger Car Registrations (Thousands)	–	–	–	–	August	14.8	16.6	13.9
Year to Date (Thousands)	–	–	–	–	August	113.2	98.4	102.0

[1] Current Indicators Are Preliminary and Subject to Revision.
[2] Not Seasonally Adjusted.

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967=100)

	United States				*Indiana*			
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	June	136.4	135.9	135.5	June	110.9	111.2	113.2
Manufacturing Employment	June	95.4	95.1	97.3	June	78.7	78.1	83.6
Average Weekly Hours (No.)[2]	June	40.3	39.9	39.3	June	40.8	40.6	39.7
Average Weekly Earnings ($)[2]	June	355.04	350.32	334.05	June	408.82	405.59	388.66
Nonmanufacturing Employment	June	153.5	153.0	152.8	June	133.0	133.8	133.5
Unemployment Rate (%)	June	9.8	10.0	9.4	June	9.4	10.7	11.3
Unemployment–Married Males (%)	June	6.6	7.0	6.4	–	–	–	–
Continued Unemployment Claims	–	–	–	–	–	–	–	–
Production					–	–	–	–
Bituminous Coal	May	123.0	132.0	148.4	–	–	–	–
Industrial Electricity Production	March	133.5	130.8	135.1	June	162.6	154.6	150.3
Industrial Electricity Sales	–	–	–	–	June	141.4	138.6	137.6
Manufacturing Production	June	146.6	145.0	137.7	–	–	–	–
Raw Steel Production	–	–	–	–	June	222.0	217.3	189.4
Construction					June	83.1	74.9	66.0
Construction Activity–Total	April	316.3	314.9	288.4	June	293.0	276.7	176.3
Residential Housing Starts	June	136.0	140.0	70.8	June	164.9	168.4	177.7
Residential Expenditures	April	411.3	388.4	284.8	–	–	–	–
Nonresidential Expenditures	April	275.7	284.8	295.3	June	213.3	229.3	211.4
Public Expenditures	April	178.1	187.1	198.6	–	–	–	–
Public Works and Utilities	–	–	–	–	–	–	–	–
Other Indicators								
Personal Income Per Capita ($)	May	11623.2	11503.2	11078.1	83:1	10359.0	10234.0	9887.0
Passenger Car Sales (Thousands)[2]	June	904.0	837.0	651.0	–	–	–	–
Year to Date (Thousands)	June	4546.0	3642.0	4038.0	–	–	–	–
Passenger Car Registrations (Thousands)	–	–	–	–	May	16.3	15.3	15.6
Year to Date (Thousands)	–	–	–	–	May	64.5	48.2	62.7

[1] Current Indicators Are Preliminary and Subject to Revision.
[2] Not Seasonally Adjusted

U.S. and Indiana Man-Hours in Industrial Production
(Seasonally Adjusted Data)

	United States (Millions)				*Indiana*			
	Latest Month		*Percent Change From Previous Month*	*Percent Change From One Year Ago*	*Latest Month*		*Percent Change From Previous Month*	*Percent Change From One Year Ago*
Manufacturing	September	778.4	2.1	7.7	September	23273.1	1.9	4.7
Food	September	68.9	0.2	0.8	September	1529.4	5.0	−5.9
Apparel and Textiles	September	70.0	0.5	8.7	September	345.1	−1.2	−8.9
Lumber and Wood	September	27.3	−0.9	14.8	September	750.9	−1.0	22.0
Furniture	September	18.3	1.6	13.3	September	734.4	−3.2	11.2
Paper	September	27.6	1.8	4.1	September	461.5	−2.2	−13.0
Printing	September	46.8	1.4	0.1	September	1099.0	−1.2	−2.5
Chemicals	September	44.2	−0.1	0.6	September	1200.7	−4.6	−7.8
Petroleum and Products	September	8.6	0.0	−6.7	September	188.2	−3.5	2.2
Rubber and Plastics	September	31.1	2.1	12.0	September	1414.7	2.5	16.5
Stone, Clay and Glass	September	25.3	1.0	7.2	September	709.1	−6.7	−7.2
Primary Metals	September	35.2	2.9	6.3	September	3183.4	−2.8	1.2
Fabricated Metals	September	58.9	2.7	13.9	September	1989.5	3.8	6.4
Nonelectrical Machinery	September	81.1	0.4	1.1	September	2314.4	3.7	3.8
Electrical Machinery	September	85.0	2.2	9.6	September	3534.4	7.8	4.6
Transport Equipment	September	77.4	5.7	16.0	September	2937.5	2.7	3.2

Indiana Business Review
Division of Research
Graduate School of Business
Indiana University
Bloomington, Indiana 47405

September-October 1983

Nonprofit Organization
U.S. Postage
PAID
Bloomington, Indiana
Permit No. 2

LIBRARY